

**TITLE OF INVENTION**

CURABLE BASE-RESISTANT FLUOROELASTOMERS

5                   **CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a division of application Serial No. 10/137,914 filed May 2, 2002, <sup>now U.S. Patent 6,703,450</sup> which claims priority to provisional application No. 60/290,900, filed May 15, 2001.

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10                   **FIELD OF THE INVENTION**

This invention relates to polyhydroxy curable fluoroelastomer compositions wherein the fluoroelastomer comprises copolymerized units of tetrafluoroethylene, propylene, and a cure site monomer selected from the group consisting of i) trifluoroethylene, ii) 3,3,3-trifluoropropene-1, iii) 15 1,2,3,3,3-pentafluoropropylene, iv) 1,1,3,3,3-pentafluoropropylene, and v) 2,3,3,3-tetrafluoropropene.

**BACKGROUND OF THE INVENTION**

Specialty fluoroelastomers made from copolymers of tetrafluoroethylene (TFE), propylene (P), and optionally vinylidene fluoride 20 (VF<sub>2</sub>) (i.e. TFE/P dipolymers or VF<sub>2</sub>/TFE/P terpolymers) are often utilized in applications wherein resistance to alkaline fluids and other high pH chemicals is critical. The TFE/P dipolymers have the best resistance to alkaline fluids. Terpolymers containing more than about 10 wt.% vinylidene fluoride units generally do not have significantly better alkaline 25 fluid resistance than do conventional fluoroelastomers made from copolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene.

In order to fully develop physical properties such as tensile strength, elongation, and compression set, elastomers must be cured, i.e. 30 crosslinked. In the case of fluoroelastomers, this is generally accomplished by mixing uncured polymer (i.e. fluoroelastomer gum) with a polyfunctional curing agent and heating the resultant mixture under pressure, thereby promoting chemical reaction of the curing agent with